KE XU

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SKILLS

Languages: Python, JavaScript, C++, SQL, TypeScript, Java, C, HTML, CSS

Tools: Node, React, Redux, MongoDB, MySQL, PostgreSQL, GCP, AWS, Docker, Kubernetes, Kafka, Scikit-Learn

EXPERIENCE

Siemens (Enlighted) | **Data and ML Engineer**   Jan 2023 – Present

- Contributed to researching innovative solutions for Enlighted's smart lighting system, which is utilized by renowned organizations such as **Google** and **Netflix**
- Implemented a data collection pipeline to gather and preprocess large-scale datasets from **Kafka** streams using **Python**, resulting in an **8% i**ncrease in accuracy for a regression model
- Created an **AWS Lambda** function in **Python** that interacts with APIs to retrieve data, performs parsing, and uploads to s3, leading to a streamlined and efficient data management process

LoopX | **Software Engineer**   Oct 2022 – Present

- Integrated a secure login/sign-up process for the business management system using **MySQL** and **Node.js**
- Developed a **Three.js**-based PCD file processor that renders interactive 3D maps and assigns different colours to points based on their intensities, significantly enhancing graph visualization capabilities
- Implemented an annotation feature in **JavaScript** that enables users to label curbs on maps and export coordinates, providing critical data for autonomous delivery services.

Siemens (Enlighted) | **IoT Software Developer**   Jan 2022 – Apr 2022

- Developed a gateway simulator in **Java**, and automated the operation in **Python** using **GCP Kubernetes Engine** and **Selenium**, reducing server scalability testing setup time by **84%** and manual handling time to **0**
- Implemented sensor data streaming with **Kafka**, and streamlined the process of health checking, proactively monitoring the performance of sensors
- Built the statistics webpage for Enlighted's energy management system using **d3.js**, **React**, **Redux** and **Jest**, allowing customers to track product energy consumption graphically

Quali AI | **Software Developer**   May 2021 – Aug 2021

- Built critical features for AIXEL's web application using **MongoDB**, **Express**, **React TypeScript**, enabling customers to collect, label, and analyze over **10,000** photos
- Spearheaded the development of data pipelines and robust **REST APIs** using **Node**, **Flask**, and **Google Cloud Pub/Sub** to implement data streaming between devices and server
- Automated the process of building, end to end testing, and deploying machine learning models using **Python**, **Docker**, and **Google Cloud AutoML Vision**, significantly decreasing modeling times

CERTIFICATES

AWS Certified Cloud Practitioner   Apr 2022 - Apr 2025

EDUCATION

University of Waterloo | **Bachelor of Software Engineering**   Sept 2020 - Apr 2025

Courses: Database Management / Design (SQL), Data Structures and Algorithms, OOP Programming (C++)